

AMENDMENTS TO THE CLAIMS

Please amend claims 20, 22 and 23; and cancel claims 21 and 24, as set forth in the listing of claims that follows:

1-11. (Cancelled)

12. (Withdrawn) An electrical inter-connection system comprising:
a circuit board substrate including at least one aperture, said aperture being defined by a sidewall having a conductive surface; and
a conductive body having at least one protrusion extending from a base, said protrusion engaging two spaced-apart portions of said sidewall upon inserting said protrusion in said aperture, and once inserted, said protrusion being seized within said aperture at said two spaced-apart portions with an interference fit between said protrusion and said two spaced-apart portions.

13. (Withdrawn) An electrical inter-connection system as recited in claim 12, wherein said aperture has an eccentric shape.

14. (Withdrawn) An electrical inter-connection system as recited in claim 13, wherein each of said two spaced-apart portions comprise a flat surface.

15. (Withdrawn) An electrical inter-connection system as recited in claim 14, wherein said protrusion has a generally cylindrical shape,

16. (Withdrawn) An electrical inter-connection system as recited in claim 15, wherein said circuit board substrate has a first surface and opposing second surface, said aperture extending between said first and second surfaces.

17. (Withdrawn) An electrical inter-connection system as recited in claim 16, wherein said aperture is shaped as a slot having a length and a width.

18. (Withdrawn) An electrical inter-connection system as recited in claim 17, wherein the difference between said slot width and said protrusion diameter is between 1.5% and 20% of said slot width.

19. (Withdrawn) An electrical inter-connection system as recited in claim 12, wherein said protrusion has a draft angle between 1 and 3 degrees.

20. (Currently Amended) A method of forming an electrical connection in a through-hole defined in a circuit board substrate, comprising:

providing a circuit board substrate having first and second surfaces, a through-hole extending between said first and second surfaces;

providing a pin block, said pin block comprising a dielectric housing having a body and at least one stand-off, said body having a board mounting face and an opposed mating face, said at least one stand-off extending from said board mounting face,

providing a conductive terminal having first and second ends, said terminal being positioned in said pin block such that said first end extends through said body between said board mounting face and said mating face;

providing a first conductive pad on said first surface of said circuit board substantially adjacent said through-hole;

placing solder paste ~~a conductive bonding agent~~ on said first conductive pad spaced apart from the through-hole;

assembling said pin block and said terminal to said circuit board substrate, such that placing said terminal is placed into said through-hole such that said first end is exposed for electrical connection with a mating element on said first side of said circuit board and said second end is exposed for electrical connection with a mating element on said second side of said circuit board, and further such that said board mounting face of said pin block faces the first surface of the printed circuit board and said at least one stand-off is placed against said first surface of said circuit board substrate to locate said

pin block a sufficient distance from said circuit board to enable a solder fillet to form between said conductive terminal and said first conductive pad; and

re-flowing said solder paste ~~conductive bonding agent~~ causing it to flow solder into said through-hole and form a solder fillet so that it electrically connects said terminal with said first conductive pad.

21. (Cancelled)

22. (Currently Amended) A method as recited in claim 20, further comprising the step of providing a second conductive pad on said second surface of said circuit board substantially adjacent said through-hole;

wherein said step of causing said solder paste ~~bonding agent~~ to flow further includes causing said solder fillet ~~conductive bonding agent~~ to flow through said through-hole such that it electrically connects said terminal with said second conductive pad.

23. (Currently Amended) A method as recited in claim 20, further comprising the step of placing a stencil over said through-hole prior to said step of placing solder paste a ~~conductive bonding agent~~ on said first conductive pad to prevent said solder paste ~~conductive bonding agent~~ from being placed in said through-hole and said method further comprises the step of removing said stencil prior to said step of placing said terminal into said through-hole.

24. (Cancelled)

25. (Original) A method as recited in claim 20, wherein said through-hole includes a plating extending between said first and second surfaces of said circuit board.